## Message

Buck, Jeremy [jeremy\_buck@fws.gov] From:

7/14/2020 6:57:58 PM Sent:

To: Carlson, Daniel J CIV USARMY CENWS (USA) [Daniel.J.Carlson@usace.army.mil]; PETERSON Jenn L

[Jenn.L.PETERSON@state.or.us]; shil@yakamafish-nsn.gov; Sheldrake, Sean [sheldrake.sean@epa.gov]; Bob Schwarz

[Bob.SCHWARZ@state.or.us]

christine.m.budai@usace.army.mil; Kerns, Kristen M CIV USARMY CENWS (USA) [Kristen.Kerns@usace.army.mil]; CC:

Gardiner, William W CIV USARMY CENWS (USA) [William.W.Gardiner@usace.armv.mil]

RE: [EXTERNAL] FW: July TAG Meeting Subject:

Attachments: BradfordBassGraphStats.ppt

Hi Daniel-

Sorry for the late reply regarding the reference area.

The concerns with using the proposed reference site is that there are some total PCB concentrations in smallmouth bass samples that are identified as values of high influence or outliers (using box plots), and these values could be indicative of a PCB source. For the 2007 and 2008 smallmouth bass data, these samples include 071027R05SB (total Aroclor PCBs = 164 ug/kg) and 080521R16SB (total Aroclor PCB = 132 ug/kg). For the 2011 data set, this includes the bass sample R08202011SB50 in 2011 (total PCB congeners =407 ug/kg). With these values removed, the data follow a more normal distribution (based on probability plots) and have a lower coefficient of variation. Furthermore, total PCBs in many samples in bass from the Forebay at Cascade Island and around Goose Island more closely resemble values at the Reference site compared to bass from Bradford Island. With proper consideration and possible elimination of outliers from the smallmouth bass data, it appears that parts of the Forebay may serve as an appropriate reference area for comparison to samples collected at the Bradford Island shoreline. Rather than collecting additional reference samples, consideration should also be given to using existing data to derive a background concentration for comparison to PCBs at Bradford Island. A background level of total PCBs selected for bass derived from existing data could also be compared to fish sampled elsewhere along the Columbia River where PCB sources are limited. Deriving a background concentration from existing data, or limiting reference sampling within the Forebay, would allow for an increased number of samples to better address data variation.

In addition to smallmouth bass, there are concerns using resources to further identify reference conditions for crayfish. Total PCBs in all crayfish samples from the reference area are below detection Locations in the Forebay are also below detection limits, and there is only a slight elevation in dioxin-like congeners (as well as raised detection limits) for the Bradford Island samples. This indicates that the detection limit should be considered the background concentration for total PCBs in crayfish, and there would be no need to collect more crayfish in the reference area. This would allow for resources to be used to collect more crayfish at Bradford Island to help identify sources, or for spending on other receptors.

I have attached a few slides showing the graphs in reference to the smallmouth bass concerns, and I can present these graphs for discussion during today's meeting if we have a few minutes in the agenda. Thanks -Jeremy

```
----Original Message----
From: Carlson, Daniel J CIV USARMY CENWS (USA) <Daniel.J.Carlson@usace.army.mil>Sent: Tuesday, July 7, 2020 4:49 PM
To: PETERSON Jenn L <Jenn.L.PETERSON@state.or.us>; Laura Shira <shil@yakamafish-nsn.gov>; Buck, Jeremy
```

<jeremy\_buck@fws.gov>; Sheldrake.sean@epa.gov; 'SCHWARZ Bob' <Bob.SCHWARZ@state.or.us>
Cc: BUDAI, Christine M (Chris) CIV USARMY CENWP (USA) <Christine.M.Budai@usace.army.mil>
Subject: [EXTERNAL] FW: July TAG Meeting

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Hi all,

To clarify the request in my below email, please send any such site info / data for the current reference area (if available) prior to the day of the 14 July meeting if possible. It'd be great to review anything beforehand.

Thank you!

Daniel Carlson Physical Scientist

U.S. Army Corps of Engineers, Seattle District

Office: (206) 764-6899 Cell: Ex. 6 Personal Privacy (PP) ----Original Message----From: Carlson, Daniel J CIV USARMY CENWS (USA) Sent: Tuesday, July 7, 2020 11:47 AM
To: BUDAI, Christine M (Chris) CIV USARMY CENWP (US) <Christine.M.Budai@usace.army.mil>; Duncan, Kenneth D III CIV USARMY CENWP (US) <Kenneth.D.Duncan@usace.army.mil>; Gardiner, William W CIV USARMY CENWS (USA) <William.W.Gardiner@usace.army.mil>; Johnson, Craig J CIV (USA) <Craig.J.Johnson@usace.army.mil>; Kerns, Kristen M CIV USARMY CENWS (USA) <Kristen.Kerns@usace.army.mil>; Matson, Jeffrey T CIV USARMY CENWP (USA) <Jeffrey.T.Matson@usace.army.mil>; Mcbain, Melissa A CIV (USA) <Melissa.A.Mcbain@usace.army.mil>; Scheidt, Kristin M CIV USARMY CENWP (USA) <Kristin.M.Scheidt@usace.army.mil>; Suess, Alison M CIV USARMY CENWS (ÚS) <Alison.M.Suess@usace.army.mil>; Richwine, Kathryn A CIV (USA) <Kathryn.A.Richwine@usace.army.mil>; Carlson, Daniel J CIV USARMY CENWS (USA) <Daniel.J.Carlson@usace.army.mil>; Barajas, Alexander CIV USARMY CENWP (USA) <Alexander.Barajas@usace.army.mil>; Henon, Jeffrey M CIV USARMY CENWP (USA) <Jeffrey.M.Henon@usace.army.mil>; Royer, Ida M CIV USARMY CENWP (USA) <Ida.M.Royer@usace.army.mil>;
abchang@bpa.gov; Buck, Jeremy <jeremy\_buck@fws.gov>; Soscia, Mary Lou <Soscia.Marylou@epa.gov>;
Sheldrake.sean@epa.gov; jeff.fisher@noaa.gov; david.g.farrer@state.or.us; Heidi Nelson (DEQ <Heidi.NELSON@state.or.us>; PETERSON Jenn L <PETERSON.Jenn@deq.state.or.us>;
POULSEN.Mike@deq.state.or.us; 'SCHWARZ Bob' <Bob.SCHWARZ@state.or.us>; todd.hudson@state.or.us; Smith,
Andrew (ECY) <ansm461@ECY.WA.GOV>; 'McBride, David (DOH)' <Dave.McBride@DOH.WA.GOV>; Abbett, Marian L. (ECY) <MABB461@ECY.WA.GOV>; brandy.humphreys@grandronde.org; holly.partridge@grandronde.org; Jack Bell jackb@nezperce.org>; Marissa Merker <marissam@nezperce.org>; dexb@yakamafish-nsn.gov; Rose Longoria-Ionr@yakamafish-nsn.gov>; Laura Shira <shil@yakamafish-nsn.gov>; bill@ridolfi.com; tim.outman@ctwsbnr.org Subject: July TAG Meeting

Hello everyone,

We are moving the 23 July TAG meeting up to next Tuesday, 14 July (1-3pm), for discussing the bass/crayfish and clam QAPPs. This is intended to accommodate sooner discussion of the TAG feedback for proposing to cut bass collection in the reference area in order to concentrate efforts in the forebay.

In order to support our discussions regarding the reference area, it would be helpful to have more specific data regarding concerns of the current reference location. Based on sediment data, it appears to be a suitable reference location. If there are existing State-led sites or other data that would lead us to believe the sediment or biota from the current reference area would be directly influenced by a specific source, that would be great for the group to have in hand as we discuss the upcoming tissue sampling.

Thank you,

Daniel Carlson
Physical Scientist
U.S. Army Corps of Engineers, Seattle District Environmental Engineering and Technology Section
Office: (206) 764-6899
Cell: Ex.6 Personal Privacy (PP)